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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/615,230  | 07/08/2003  | Oleg Abramov         | 05854.0021          | 8381             |
| 33717   | 7590        | 04/13/2005           | EXAMINER            |                  |
| GREENBERG TRAURIG LLP<br>2450 COLORADO AVENUE, SUITE 400E<br>SANTA MONICA, CA 90404 |             |                      | BOMAR, THOMAS S     |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |

3672

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/615,230

Applicant(s)

ABRAMOV ET AL.

Examiner

Shane Bomar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 9-11 and 17-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 12 and 13 is/are rejected.
- 7) ☒ Claim(s) 6-8 and 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/14/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 2 and 4 are objected to because of the following informalities: in each claim it appears that --to-- is missing between the recitations of “conform” and “an”. Appropriate correction is required.
2. Claim 5 is objected to because of the following informalities: in order for this claim to remain consistent with the teachings of the specification, the recitation of “the shape of a hemisphere with an external diameter” should be changed to --the shape of a hemisphere with an inner diameter-- (see page 13, lines 9-11 of the instant specification). Appropriate correction is required.
3. Claims 9-11 and 17-19 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only, and/or, cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

### ***Drawings***

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 10-17, 19, 30, 35, and 43. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

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prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. Figure 2 appears to incorporate more than one drawing under one figure number. If this is the case, each separate drawing must given it's own figure number, for example, 2a, 2b, etc.

### *Specification*

6. The disclosure is objected to because of the following informalities: in lines 23-24 of page 12, reference numeral (29) is given to two different parts; in line 7 of page 13 and line 2 of page 14, reference numeral (39) is given to two different parts; the recitation of "figure 2" in line 24 of page 13 should be --figure 3--; in line 14 of page 14, the acoustic device is called (29) when it should be (20); the recitation of "and 7" in line 23 of page 14 should be --and 6a--. Also, the page numbers at the top of each page appear to have typographic errors that make, for example, page 11 look like page 111. This could cause confusion for the publication printers in the future if the application was to be allowed.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 3,583,677 to Phillips.

Regarding claim 1, Phillips discloses a method for increasing the production capacity of wells that contain oil, gas and/or water (see col. 2, lines 17-19), well defined because mechanical vibrations are introduced in the well bore region to produce shear vibrations in the well bore region due to displacement of phase of mechanical vibrations produced along the axis of the well, achieving alternately tension and pressure by superposition of longitudinal and shear waves, thereby stimulating the occurrences of mass transference processes within said well (see col. 2, lines 23-44 and col. 3, lines 42-65).

Regarding claims 2 and 4, the waves generated by the device provide an acoustic flow since the device is operating on the principles of acoustics (see col. 4, lines 22-36), with a speed  $U_f$  (since  $U_f$  has not been defined, whatever the speed of fluid flow from Phillips' method would meet this limitation) and a wavelength  $\lambda/4$ , since this is a commonly known and characteristic wavelength.

Regarding claim 3, Phillips discloses an electro acoustic device for increasing the production capacity of wells that contain oil, gas and/or water by introducing mechanical waves in the well bore region of said wells, well defined because it comprises a sonotrode whose irradiation surface is developed along the axis of the well (see col. 2, lines 28-33), whose length must not be less than half the wavelength generated (see col. 3, line 74 through col. 4, line 4, and col. 5, lines 34-45), producing shear vibrations in the well bore region due to displacement of

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phase of mechanical vibrations produced along the axis of the well, achieving alternately tension and pressure due to the superposition of the longitudinal and shear waves, and stimulating in this way the occurrences of mass transference processes within said wells (see col. 2, lines 23-44 and col. 3, lines 42-65).

### *Double Patenting*

9. Claims 1-5, 12, and 13 are directed to the same invention as that of claims 1, 2, 6-8, 15, and 16 of commonly assigned 10/986,677. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302), the assignee is required to state which entity is the prior inventor of the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

10. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

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11. Claims 1-5, 12, and 13 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 2, 6-8, 15, and 16 of copending Application No. 10/986,677. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

*Allowable Subject Matter*

12. Claims 6-8 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

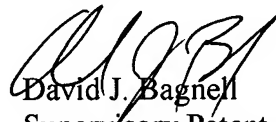
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bodine, Jr., Kompanek, Lieng et al, Montierth et al, Soliman et al, Wesley, and Zunkel et al teach various methods for stimulating wellbore production using acoustic and/or ultrasonic techniques.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 571-272-7026. The examiner can normally be reached on Monday - Thursday from 7:00am to 4:30pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David J. Bagnell  
Supervisory Patent Examiner  
Art Unit 3672



tsb

April 6, 2005